

Application No. 10/613,620  
Response dated July 5, 2007  
to Office Action mailed May 11, 2007

### **REMARKS**

This Communication is responsive to the Office Action mailed May 11, 2007, made final per MPEP § 706.07(a). Claims 24-30, 34-37, 44-62 are pending and stand rejected. In view of the following remarks, Applicant respectfully submits that this application is in complete condition for allowance and requests reconsideration of the application.

As an initial matter, Applicant kindly reminds Examiner when final rejections are proper. See MPEP § 706.07(a). In pertinent part, “[S]econd or any subsequent actions on the merits shall be final *except where the Examiner introduces a new ground of rejection that is neither necessitated by applicant’s amendment of the claims . . .*” (Emphasis added). In other words, Applicant submits that the claim amendments made in the response to the Office Action mailed September 20, 2006, did not prompt new grounds for rejection. Please recall that “simple chemical vapor” was added to the preamble in claims 24-30, 34-37, and 44-57. Applicant therefore requests withdrawal of the final rejection as premature per MPEP § 706.07(d).

### **35 U.S.C. §112**

Claims 24-30, 34-37, and 44-62 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant respectfully traverses the rejection.

The Examiner contends that “simple chemical vapor deposition” is a relative term that renders the claims indefinite. Applicant has evidence that demonstrates that

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“simple CVD” has a meaning known to persons having ordinary skill in the art. In particular, Applicant refers Examiner examine issued U.S. patents that use the terms “simple chemical vapor deposition” or “simple CVD.” Exhibit A attached hereto is a result of a simple search of U.S. issued patents having the terms “simple chemical vapor deposition” or “simple CVD” used therein. As shown in Exhibit A, there are at least 46 issued patents using the above-identified terms. One U.S. Patent in particular contains a definition of simple CVD, that is, U.S. Patent No. 6,984,592. Thus, as evidenced by issued U.S. Patents, the term “simple chemical vapor deposition” is not a relative term rendering the claim indefinite. Quite the contrary, it is a term used by those skilled in the art. Accordingly, Applicant respectfully requests that the rejection be withdrawn.

### **35 U.S.C. §103**

Claims 24-30, 34-37, and 44-62 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,902,638 to Vakil (hereinafter *Vakil*). Of the rejected claims, claims 24, 34, 44, 48, and 58 are independent claims. Applicant disagrees with the rejection.

The Examiner contends that in light of *Vakil* the claimed method is obvious. However, to establish a case of prima facie obviousness, the prior art reference must teach or suggest all the claim limitations. MPEP § 2143. Here, the Examiner admits that *Vakil* fails to teach a carrier gas to transport the metal to the chamber (page 3, end of 2nd paragraph). Yet, the Examiner then fails to suggest how the metal is transported to the chamber “without assistance of a separate flow of a carrier gas” as recited in

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independent claims 24, 34, 44, 48, and 58. In contradiction to the Examiner's admission, the Examiner mistakenly relies on *Vakil*'s silence as to how the elements are transported for the proposition that *Vakil* actually discloses transportation "without assistance of a separate flow of a carrier gas," as claimed. Of course, this is not the proper standard. Specifically, the standard that the Examiner should have applied is whether there is something in *Vakil* that would have suggested to a person of ordinary skill in the art the desirability of co-depositing a vapor phase reactant transported to the main reaction chamber "without assistance of a separate flow of a carrier gas" as set forth in Applicant's independent claims. See MPEP § 2143.01. *Vakil* would not have suggested to a person of ordinary skill in the art that the other element can be co-deposited by a vapor phase reactant transported to the main reaction chamber "without assistance of a separate flow of a carrier gas." For at least these reasons, Applicant respectfully requests that the Examiner withdraw the rejection of independent claims 24, 34, 44, 48, and 58.

Independent claims 24, 34, 44, 48, and 58 are patentable for additional reasons. The Examiner failed to cite any portion of *Vakil* that discloses "a receptacle in fluid communication with a main reaction chamber." To establish a prima facie case of obviousness, *Vakil* must teach or suggest all the claim limitations. MPEP § 2143. However, *Vakil* did not teach or suggest any type of receptacle that is external to the main reaction chamber, as claimed. Therefore, for at least this additional reason, Applicant requests that the Examiner withdrawal the rejection.

Independent claim 58 recites "generating a first vapor phase reactant containing a first extrinsic metal by heating a metal-halogen Lewis acid". *Vakil* fails to teach or

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suggest heating a metal-halogen Lewis acid to generate a first vapor phase reactant. Instead, *Vakil* discloses individual elements and oxides of those elements as the other elements. To establish a prima facie case of obviousness, *Vakil* must have taught or suggested all the claim limitations to a person of ordinary skill in the art. MPEP § 2143. Because the Examiner has failed to establish a prima facie case of obviousness, Applicant requests that the rejection of independent claim 58 be withdrawn.

Independent claim 48 recites "a metal-halogen Lewis acid." As explained above in connection with independent claim 58, *Vakil* fails to disclose or suggest heating a metal-halogen Lewis acid to generate a vapor phase reactant. For at least this additional reason, Applicant requests that the Examiner withdraw the rejection of independent claim 48.

Because claims 25-30, 35-37, 45-47, 49-57, and 59-62 depend from independent claims 24, 34, 44, 48, and 58, respectively, Applicant submits these dependent claims are also patentable for at least the same reasons as cited above. Furthermore, each of the dependent claims sets forth a combination of elements and limitations not disclosed or suggested by *Vakil*.

## **CONCLUSION**

Applicant has made a bona fide effort to respond to each rejection set forth in the Office Action. In view of the foregoing remarks, this application is submitted to be in complete condition for allowance and, accordingly, a timely notice of allowance to this effect is earnestly solicited. In the event that any issues remain outstanding, the Examiner is invited to contract the undersigned to expedite issuance of this application.

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Applicant does not believe fees are due in connection with filing this communication. If, however, any additional fees are necessary as a result of this communication, the Commissioner is hereby authorized to charge any under-payment or fees associated with this communication or credit any over-payment to Deposit Account No. 23-3000.

Respectfully submitted,

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**EXHIBIT A**

<b><u>No.</u></b>	<b><u>Patent No.</u></b>	<b><u>Title</u></b>
1	7,211,509	Method for enhancing the nucleation and morphology of ruthenium films on dielectric substrates using amine containing compounds
2	7,196,007	Systems and method of forming refractory metal nitride layers using disilazanes
3	7,148,542	Semiconductor device and method of forming the same
4	7,122,464	Systems and methods of forming refractory metal nitride layers using disilazanes
5	7,115,528	Systems and method for forming silicon oxide layers
6	7,115,166	Systems and methods for forming strontium-and/or barium-containing layers
7	7,112,485	Systems and methods for forming zirconium and/or hafnium-containing layers
8	7,109,515	Carbon containing tips with cylindrically symmetrical carbon containing expanded bases
9	7,087,481	Systems and methods for forming metal oxides using metal compounds containing aminosilane ligands
10	7,053,417	Semiconductor led device and producing method
11	7,041,609	Systems and methods for forming metal oxides using alcohols
12	7,030,042	Systems and methods for forming tantalum oxide layers and tantalum precursor compounds
13	6,995,081	Systems and methods for forming tantalum silicide layers
14	6,984,592	Systems and methods for forming metal-doped alumina

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15	6,967,159	Systems and methods for forming refractory metal nitride layers using organic amines
16	6,958,300	Systems and methods for forming metal oxides using metal organo-amines and metal organo-oxides
17	6,894,754	Substrate with a flattening film, display substrate, and method of manufacturing the substrates
18	6,794,284	Systems and methods for forming refractory metal nitride layers using disilazanes
19	6,784,049	Method for forming refractory metal oxide layers with tetramethyldisiloxane
20	6,730,164	Systems and methods for forming strontium- and/or barium-containing layers
21	6,709,907	Method of fabricating a thin film transistor
22	6,692,324	Single self-aligned carbon containing tips
23	6,649,431	Carbon tips with expanded bases grown with simultaneous application of carbon source and etchant gases
24	6,646,328	Chip antenna with a shielding layer
25	6,605,161	Inoculants for intermetallic layer
26	6,162,488	Method for closed loop control of chemical vapor deposition process
27	6,013,318	Method for the combustion chemical vapor deposition of films and coatings
28	5,894,151	Semiconductor device having reduced leakage current
29	5,863,836	Method of depositing thin metal films
30	5,863,604	Method for the combustion chemical vapor deposition of films and coatings

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31	5,858,465	Combustion chemical vapor deposition of phosphate films and coatings
32	5,849,360	Tube chemical gas deposition method of preparing titanium nitride coated titanium carbide for titanium carbide/silicon nitride composites
33	5,658,614	Platinum aluminide CVD coating method
34	5,652,021	Combustion chemical vapor deposition of films and coatings
35	5,372,645	Method for determining thickness of chemical vapor deposited layers
36	5,300,313	Method for determining thickness of chemical vapor deposited layers
37	5,286,520	Preparation of fluorine-doped tungstic oxide
38	5,211,731	Plasma chemical vapor deposition of halide glasses
39	5,132,755	Field effect transistor
40	4,915,744	High efficiency solar cell
41	4,476,178	Composite silicon carbide coatings for carbon-carbon materials
42	4,472,476	Composite silicon carbide/silicon nitride coatings for carbon-carbon materials
43	4,442,589	Method for manufacturing field effect transistors
44	4,262,035	Modified chemical vapor deposition of an optical fiber using an rf plasma
45	4,076,380	Graded index optical fiber
46	3,973,270	Charge storage target and method of manufacture